NumenCasus

Abstract

when working on partition numbers we can easily derive how many possibilities are there of a number but that is impossible to write those possibilities when the number is a huge number.

To solve this problem I am introducing a new way to write numbers NumenCasus.

NumenCasus is not about writing numbers of their partitions but it is a whole new system of writing numbers which is powerful enough to revolutionize the mathematics.

NumenCasus is not an trick or anything, it is fully mathematically described and has various functions like addition, subtraction, multiplication ect.

Using NumenCasus on small numbers such as 2, 3, 4 ect is an option but when it comes to huge numbers and finding their partitions such as 94749 we can use NumenCasus to get all partitions of that number. NumenCasus is easy as we are learning a 1st grade chapter.

It is easy enough that even a 6 year old child can perform NumenCasus on its fingertips.

NumenCasus –Advantages

Humans always tend towards easy way of learning, and the same here is with NumenCasus,

The following are the advantages of NumenCasus—

- Easy even for a 5 year child
- Partitions can be easily found even without the need of a pen or a notebook
- Has many other formulas which can be used to control the derivations
- Not any type of mathematical trick
- It introduces many ways of writing a single number, nearly double of that number, which makes it flexible to other formulas
- Can be easily inter-converted between NumenCastical form and numerical form
- Results are always 100% accurate

Why to use NumenCasus—

Especially when it comes on partition numbers NumenCasus is a boon!

We can easily derive how many partitions are there of a number, but when it comes to write those partitions and so in huge numbers all our mathematics gets failed and we get struck on numbers but if we use NumenCasus for partitions in that case we can easily write partitions without missing any of one. It isn’t time taking. If you want to write partitions of a number 1098 it won’t take less than 2 mins!

Can’t trust?

Let’s see in the next pages!

About Author-

The NumenCasus is generally invented by Jayant Sharma.

The main thing is it isn't created but it's just discovered it means NumenCasus is pre-existing in mathematics!

This makes the accuracy rate of NumenCasus equal to the accuracy rate of Mathematics which is 100%

I invented NumenCasus when lying in my bed and doing partitions of random numbers than I found them interesting but time taking and difficult then I asked myself "Can I make it more easy?" and after months I laid the very foundation of NumenCasus

Which made the today's NumenCasus!

Contact Author-

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Love From India –Jayant Sharma

Now it's your turn to create a massive revolution in the world of mathematics and just remember "nothing is impossible!"

Just enjoy!

NumenCasus –An Overview

Before learning NumenCasus we are going to actually dive in NumenCasus

The new way to write numbers

First time when I saw my own invention I was worried if it would work or not and I got on testing it on several equations again and again. But when I went confident I actually performed accurate NumenCasus without any mistake, and that's the thing you need to learn first. You should be confident in mathematics! . NumenCasus is enough easy that there are almost no chances of mistake but an overconfident person would also struck here!

The thing is learning about layout. If you got the layout of NumenCasus once you would never be needed to read this journal again!

Layout Of NumenCasus-

Anything you will see in NumenCasus will always have a embedded Sigma(Σ) . Because it is all about adding numbers.

We used symbol Σ because there is only one thing in NumenCasus and that is addition!

$$s\Sigma t$$

Here is the main layout of NumenCasus

Here S stands for “Scale” and t stands for “trait”

The simple meaning of this layout is “s + no. of traits required to make to make no. n

For Example

For number 8, 2Σ2 means 2+2+2+2

For number 9, 2Σ2 means 2+2+2+2+1

For number 10, 2Σ2 means 2+2+2+2+2

Same as this,

For number 7, 3Σ2 means 3+2+2

For number 50, 10Σ19 means 10+19+19+2

For number 7, 5Σ2 means 5+2

In this way there are hundreds of ways to write a single number

How many ways we can write a number can be derived by:-

$$\frac{(n-1)^2}{2}$$

Fundamentals Of NumenCasus

Now we are on the basics of NumenCasus where we will learn about more variables and symbols used in NumenCasus.

These are the following variables used in NumenCasus—

- Repeater (denoted by m)
- Remainder (denoted by r)

Repeater (m)

When we write an NumenCastical Statement, we need a variable for the index of the required number of traits. And that is why we use m.

For example, In number 8 If we write 2Σ2

Then after scale we need to repeat the trait 3 times to meet the number

2+2+2+2 = 8 (Here the first 2 is the scale and the other three 2s are the required traits to meet number)

We required 3 more traits after scale to make 8, it means the value of Repeater(m) here is 3.

And this gives us—

$$s + mt = n$$

HERE 'S' IS USED FOR SCALE, 'M' FOR REPEATER AND 'T' FOR TRAIT

Remainder (r)

In some cases, we cannot fill the number requirement only by the help of Scale, Traits and Repeater. So there we add a new variable Remainder (r)

Remainder is the remaining number after the expansion of scale, trait and repeater

For example, In number 9 if we write 2Σ3

2+3+3

Now we cannot put another 3 for meeting the number 8 if we put another 3 then it will become 11 instead of 9. So here we can put 1 instead of 3. Which will give

2+3+3+1 = 9 (equation satisfied)

It means if we are unable to meet number (n) by traits we can use a remainder after scale and traits to satisfy the equations!

Therefore, It will give—

$$s + mt + r = n$$

This equation is only valid in the case of remainder!

Use of NumenCasus in Partition Numbers

Now we are going to perform most basic function of NumenCasus “Using it in partitions”

What partitions actually are?

The different ways to write a single number (n) are called partitions of that number. According to me, partition numbers are the one of the most fundamental building blocks of mathematics and they can also be included in partitions.

For example, partitions of number 3 are

1+1+1, 2+1, 3 (In numerical form)

1Σ1 (m=2) (In NumenCastical Notations)

1Σ2 (m=1)

0Σ3 (m=1) or can be written 3 or Σ3

Deriving our equations and formulas—

Let us take the number 8, Then the NumenCastical Table will be as follows:--

1Σ1, 1Σ2, 1Σ3, 1Σ4, 1Σ5, 1Σ6, 1Σ7

2Σ1, 2Σ2, 2Σ3, 2Σ4, 2Σ5, 2Σ6

3Σ1, 3Σ2, 3Σ3, 3Σ4, 3Σ5

4Σ1, 4Σ2,. 4Σ3, 4Σ4

5Σ1, 5Σ2, 5Σ3,

6Σ1, 6Σ2

7Σ1

THE NUMBER OF NUMBERS IN VERTICAL LINE ARE ALWAYS 1 LESSER THAN THE NUMBER (OBSERVATION)

THE CHART IS ALWAYS IN TRIANGLE LIKE STRUCTURE (OBSERVATION)

THE SUM OF S AND T OF EACH NUMBER IN THE LAST OF EACH HORIZONTAL LINE IS ALWAYS EQUAL TO N (OBSERVATION)

IN EVEN NUMBERS, THE NUMBER OF NOTATIONS IN HORIZONTAL LINE IS EQUAL TO NOTATIONS IN VERTICAL (OBSERVATION)

THE NUMBER OF TRAITS IN EACH HORIZONTAL LINE IS ALWAYS EQUAL TO NUMBER - THE SCALE OR HORIZONTAL LINE (OBSERVATION)

These were the following observations I did always in a NumenCastical Table and this is the foundation of the whole NumenCasus and our upcoming formulas, which wee are going to derive next!

Deriving Formulas Based on our observations—

I. **The number of numbers in vertical line are always 1 lesser than the number**

Here this is saying that the number of scales for a number is always 1 lesser than the number Which will give:--

$$no.of\ scales = n - 1$$
$$s = n - 1$$

Using this equation we will get the maximum scale value, it means that scales are from 1-7 from number 8.

II. **The chart is always in triangle like structure**

It is saying that the numbers in a NumenCastical Chart always follows a triangle like structure. And in even number they form a equilateral triangle, so if we got the area of triangle we can get the number of characters

$$area\ of\ equilateral\ triangle = \frac{side^2}{2}$$
$$area\ of\ triangle = total\ characters$$
$$total\ characters = \frac{(n-1)^2}{2}$$

And for odd numbers this equation is as follows:--

$$total\ characters = \frac{(n-1)^2}{2}$$

III. Traits in each horizontal line is equal to number – scale

It is saying that the value of maximum trait in each horizontal line is lesser than the index of the scale of that horizontal line. Which will give us

$$no.of\ traits\ in\ a\ scale = n - s$$

By using this equation we can easily find the value of the maximum trait in each scale
After finding the value of maximum trait we need to write the traits with that scale from 1 to the value of maximum trait

Reviewing Our Identities

Most important identities and formulas in NumenCasus are give below.

But remember we are still on the basics “partitions”

- All possibilities for a number (odd) :--

$$\frac{(n-1)^2}{2}$$

- All possibilities for a number (even) :--

$$\frac{(n-1)^2}{2}$$

- No. of scales in a number (value of the maximum one!):--

$$n-1$$

- No. of traits in given scale (value of the maximum one!:--

$$n-s$$

- Value of number (using multiplier, scale and trait):--

$$n = mt + s$$

- Value of number (using multiplier, scale, trait and if remainder also exists) :--

$$n = mt + s + r$$

ANOTHER WAY OF DENOTING REMAINDER

“ADD REMAINDER VALUE IN SCALE VALUE AND IT WON’T AFFECT THE ANSWER!”

Of course! Many numbers will include remainder in them.

For example, in number 6 if we write 3Σ2,

3+2+1 = 6

But if we add the remainder value which is 1, to scale value it will become 4Σ2

4+2 = 6

THIS FUNCTION SHOULDN'T BE DONE WHEN USING NUMENCASUS FOR PARTITIONS!

IF THIS FUNCTION IS USED WHILE DOING PARTITIONS IT WILL BREAK THE CHART AND WILL ALSO DESTROY THE CASE, HENCE THIS FUNCTION IS USED IN HIGHER OR ADVANCED NUMENCASUS!

Performing most basic function –Partitions

The “NumenCasus” is generally invented for partitions but luckily we found its many other function such as addition, subtraction ect!

NumenCasus can perform all binary functions very accurately. But before moving on to its other functions we are going to perform partitions using NumenCasus!

➢ Partitions using NumenCastical Chart

In this method, we draw a complete NumenCastical Chart to do partitions of a number.

Let we draw a NumenCastical Chart for number 5:-

1Σ1, 1Σ2, 1Σ3, 1Σ4

2Σ1, 2Σ2, 2Σ3

3Σ1, 3Σ2

4Σ1

Now we are done from making a NumenCastical chart, we just need to expand it according to number 5 to get all partitions.

How to make NumenCastical Chart:--

The way of making a NumenCastical chart is very simple.

Just take the horizontal line for traits and vertical lines for scales.

Each scale ending will make the number perfectly, as in 2Σ3, it makes 5 perfectly without leaving remainder

The no. Of traits in first scale will be equal to the number of scales in number

When to use the NumenCastical chart method?

The NumenCastical Chart (N.C chart) method is always accurate but it is sometimes timetaking.

When it comes to big numbers such as 10927838, drawing the N.C chart is like getting fooled by a dog. So in the case of big numbers we will use the ***Manual Way!***

➢ Partitions using manual method:--

In the manual method we aren’t going to draw a whole N.C chart but we are going to use our identities!

For example if we need all partitions of number 5, of scale 3 (starting number 3), then we are going to find it using our identities:-

Maximum Trait Value = 5 – 3 = 2

Then our traits are:--

3Σ1, 3Σ2

Expanding them will give, 3+1+1, 3+2

When to use manual method?

This formula is best in the case of huge numbers such as 737747, 672738, or 7726483

Because it isn’t time taking.

NOTE:--

USING MANUAL OR N.C METHOD IS ON YOU. BOTH OF THE IDENTITIES ALWAYS WORK ACCURATE!

WRITING 3Σ4 AS A MAXIMUM VALUE OR WRITING 3Σ1-3Σ4 IS SAME, IT MEANS YOU CAN WRITE ONLY “MAX = 3Σ4” OR YOU CAN WRITE “3Σ1, 3Σ2, 3Σ3, 3Σ4” I ADVISE TO WRITE 3Σ4 AND PUT A MACRON SYMBOL (~) OR A BAR SYMBOL (-) UPON 4 TO DENOTE IT AS THE MAXIMUM VALUE!

- ### Writing all partitions of number 5 using NumenCasus [Tutorial]

Using N.C Identity

1Σ1, 1Σ2, 1Σ3, 1Σ4

2Σ1, 2Σ2, 2Σ3

3Σ1, 3Σ2

4Σ1

Using Manual Method to get all possibilities of 5 starting from number 2:-

$$\max trait\ value = n - 2 = 3$$

So we got our answers as:--

2Σ1, 2Σ2, 2Σ3

Evaluating them will give:--

2+1+1+1, 2+2+1, 2+3

The End –NumenCasus

We have finished NumenCasus for partitions but NumenCasus also has many other binary functions such as square of a number, subtraction, addition, division and multiplication!

The most basics of NumenCasus are already in this pdf!

I will also publish a pdf with all function of NumenCasus soon!

Till then if any viewer have any questions related to NumenCasus feel free in asking me, my contact details are given on the first page of this pdf.

You can questions me on any e-mail and receive you answer within 6 hours!

Before going I would like to tell you a secret fact about NumenCasus that is "NumenCasus has infinite number of possibilities!"

By mistake I wrote two identities of a single function (in odd and even) just ignore it,

In NumenCasus all the identities I provided in this pdf are applicable on both odd and even!

This pdf doesn't contains enough mathematical equations and proofs as the other research papers have, this is because all research papers are published on a pre-existing field but NumenCasus is a new topic and it's an beginning.

All the proofs needed are provided in this pdf in very detail!

If anything is missing, you may contact me!

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